



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,406	12/21/2001	Shunpei Yamazaki	SEL 297	2501

7590 02/03/2005

COOK, ALEX, McFARRON, MANZO,  
CUMMINGS & MEHLER, LTD.  
SUTE 2850  
200 WEST ADAMS STREET  
CHICAGO, IL 60606

EXAMINER
----------

LAO, LUN YI

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/026,406

Applicant(s)

YAMAZAKI ET AL.

Examiner

Lao Y Lun

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1,5,6,19,21-24 and 27-30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,7-18 and 33-62 is/are allowed.
- 6) ☒ Claim(s) 2,20,25,26,31 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2, 20, 25, 26, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Mikami et al(6,753,834) .

As to claims 2, 20, 25, 26, 31 and 32, Mikami et al teach a light emitting device comprising a pixel having a light emitting element(6); means(20) for storing digital video signals and means(4) for determining a period in which the light emitting element emits a light in accordance with image information of the stored digital video signals and the display period turn up successively in one frame period and the one frame period having a display period and a writing period(see figures 1-2, 7-10; column 1, lines 22-30 and lines 49-57; column 4, lines 39-68; column 5, lines 1-10 and lines 60-64).

Art Unit: 2673

As to claims 20 and 25, Mikami et al teach an LCD display(see column 1, lines 5-10).

As to claims 26 and 32, Mikami et al teach an electroluminescence display(EL) (see column 1, lines 5-10).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiya et al(6,583,775) in view of Bell(4,996,523).

As to claims 2, 31 and 32, Sekiya et al teach a light emitting device comprising a pixel having a light emitting element(OLED)(see figures 1, 5-6); means(C<sub>S</sub>) for storing I video signals and means for determining periods in which the light emitting element emits a light corresponding to the video signals and one frame period including display period and writing period(RT)(see figures 1-7, 10-11, 14-15; column 3, lines 7-30; column 10, lines 43-68; column 11, lines 1-39; column 14, lines 51-68; column 15, lines 1-9; column 16, lines 55-68 and column 17, lines 1-28).

Sekiya et al fail to point out the video signals is digital video signals.

Art Unit: 2673

Bell teaches a light emitting device comprising a pixel having means(22n) for storing digital video signals and means for determining periods in which the light emitting element emits a light corresponding to the video signals(see figures 1-2; column 1, lines 58-68; column 2, lines 1-9 and lines 51-68; column 3, lines 6-16 and lines 41-68). It would have been obvious to have modified Sekiya et al with the teaching of Bell, so as to improve the image quality.

As to claim 32, Sekiya et al teach an electroluminescent display device(see figure 1 and column 1, lines 5-16).

5. Claims 20 and 25-26 and are rejected under 35 U.S.C. 102(b) as being anticipated by Kanaly(5,225,823) in view Sekiya et al(6,583,775).

As to claims 20 and 25-26, Kanaly teaches an LCD display device comprising a pixel having a liquid crystal cell(19); n bit memory(52, 24 bit registers) for storing digital video signals and means for determining periods in which the liquid crystal is turned on corresponding to the video signals(see figures 3, 5, 7, 9-11; column 5, lines 4-48; column 6, lines 18-61 and column 7, lines 3-55).

Kanally fails to disclose a frame period including ad display period and a writing period.

Sekiya et al teach a display device comprising a frame a frame period including a display period and a writing period(RT)(see figures 1-7, 10-11, 14-15; column 1, lines 41-43; column 14, lines 51-68 and column 15, lines 1-9; column 16, lines 55-68 and column 17, lines 1-28). It would have been obvious to have

Art Unit: 2673

modified Kanaly with the teaching of Sekiya et al, so to reduce two memory into one memory in a pixel by writing and display image in the same frame.

As to claim 26, Sekiya et al teach an electroluminescent display device(see figure 1 and column 1, lines 5-16).

6. Claims 20 and 25-26 and are rejected under 35 U.S.C. 102(b) as being anticipated by Koyama(5,798,746) in view Sekiya et al(6,583,775).

As to claims 20 and 25-26, Koyama teaches an LCD display device comprising a pixel having a liquid crystal cell(121); means(117-120) for storing digital video signals and means for determining periods in which the liquid crystal is turned on corresponding to the video signals(see figure 1; column 3, lines 58-68 and column 4, lines 1-13).

Koyama fails to disclose a frame period including ad display period and a writing period.

Sekiya et al teach a display device comprising a frame a frame period including a display period and a writing period(RT)(see figures 1-7, 10-11, 14-15; column 1, lines 41-43; column 14, lines 51-68 and column 15, lines 1-9; column 16, lines 55-68 and column 17, lines 1-28). It would have been obvious to have modified Kanaly with the teaching of Sekiya et al, since the display data need to stored in a memory before they display(see Sekiya's figures 6-7).

***Allowable Subject Matter***

7. Claims 3-4, 7-18 and 33-62 are allowable since none of cited references teach a counter circuit for outputting n counter signals with different frequencies.

***Response to Arguments***

8. Applicant's arguments with respect to claims 2, 20, 25, 26, 31 and 32 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sato et al(5,712,652) teach a display device having a memory(100).

Koyama et al(US 2002/0021274) teach a display device having a memory circuits(105-107).

Koyama(us 2002/0113763) teaches a display device having a memory circuit(105-107).

Komura et al(6,819,317) teach an LCD display having a means(5) for storing video signals, writing period and a display period.

Wan et al(JP 08-241048) teach an LED display having a digital memory.

10. Any inquiry concerning this communication or earlier communications from

Art Unit: 2673

the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

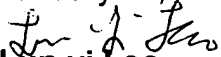
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

January 28, 2005

  
**Lun-yi Lao**  
**Primary Examiner**